

ABSTRACT

An electrokinetic pump in which the porous dielectric medium of conventional electrokinetic pumps is replaced by a patterned microstructure.

- 5 The patterned microstructure is fabricated by lithographic patterning and etching of a substrate and is formed by features arranged so as to create an array of microchannels. The microchannels have dimensions on the order of the pore spacing in a conventional porous dielectric medium. Embedded unitary electrodes are vapor deposited on either end of the channel structure
- 10 to provide the electric field necessary for electroosmotic flow.